UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,600	07/30/2001	Ping-Sheng Tseng	16503-302501	8219

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ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/918,600	TSENG ET AL.
	Examiner	Art Unit	
	Akash Saxena	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 September 2005_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-37_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-37_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _03 December 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. Claim(s) 1-37 have been presented for examination based on amendment filed on 19th September 2005.

2. Claim(s) 3,8,18, 22, 27, 31 and 35 are amended.

3. Previous non-final office action mailed on 17th June 2005 is incorporated within this office action unless otherwise specified where the more current rejection for the amended claims supercedes the previous rejection.

4. The arguments submitted by the applicant have been fully considered. Claims 1-37 remain rejected. The examiner's response is as follows.

Response to Applicant's Remarks & Examiner's Withdrawals

5. Examiner respectfully withdraws the objection to Specification (Abstract) in view of the amendment to the title of the abstract.

6. Examiner respectfully withdraws the objection to claims 4, 8, 18, 22 and 31 in view of the amendment numbering of the claims.

7. Objection to claims 29 and 34 are maintained over applicant's arguments. By applicant's own recital "Since the test bench process is executed by the host workstation, the signal can be recited as being applied to either the host workstation or a particular process executed by the workstation." Applicant although acknowledges that the scope of claims 28 and 29 is different does not distinguish between the "signal being applied to either the host workstation or a particular process executed by the workstation". Examiner thanks the applicant for the clarification but the objection is maintained in view of contradictory statements.

8. Further, antecedent basis for "test bench" is acknowledged from claim 27.

Response to Applicant's Remarks for 35 U.S.C. § 102

9. Claims 1-11, 13-15, 17-30, 32-34 & 36 were rejected under 35 U.S.C. 102(e) as

being anticipated by BU '948.

Regarding Claim 1-11, 13-15, 17-30, 32-34 & 36

Applicant has argued, "BU '948 does not discuss further how the hardware

simulator actually simulates such level of abstraction". Examiner respectfully

disagrees. BU '948 teaches and as well it is inherent within BU '948 how a hardware

simulator actually simulates such level of abstraction (BU '948: Col.5 Lines 4-14,

Col.6 Lines 1-14).

Further, applicant argues that "hardware simulator" is a "software program". In

response to applicant's argument that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e.,

"hardware simulator" is not a "software program") are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations

from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The term "hardware emulator" is used

in conventional terminology.

Applicant has argued citing BU'948 Col.9 Lines 49-52

> "[...] behavioral or high-level design representations, typical of early stages of design, are
> precluded by the use of hardware emulators."

that BU'948 does not discuss high level design representations within hardware

emulator. This sentence is cited incompletely. the complete sentence in BU'948

Col.9 Lines 49-52 teaches:

"Thus, use of unsynthesizable behavioral or high-level design representations, typical of early
stages of design, are precluded by the use of hardware emulators."

BU'948 is teaching that "unsynthesizable" behavioral representations of the design are

precluded from being synthesized in hardware emulator. It *does not* teach that

synthesizable behavioral representations of the design are precluded from being

synthesized in hardware emulator. It is inherent in the above teaching that

behavioral or high level representations can be synthesized into hardware emulator.

Further, it is well established in the art that supporting constructs like test benches

surrounding the actual behavioral/high level designs are not synthesized and certain

behavioral/high level designs are not synthesizable. BU'948 does not teach away

from the claimed limitation. Unless the claim language specifically states that

conventionally unsynthesizable behavioral/high level constructs are being

synthesized and placed on the reprogrammable logic, BU'948 teaches the disclosed

limitations (BU'948: Col.9 Lines 49-52).

Further, applicant argues that Applicant's arguments fail to comply with 37

CFR 1.111(b) because they amount to a general allegation that the claims define a

patentable invention without specifically pointing out how the language of the claims

patentably distinguishes them from the references.

Claims 13, 27 and 32 remain rejected for the same reasons as disclosed above.

Claims 2-11, 14-15, 17-20, 22-23, 25-26, 28-30, 32-34 & 36 are based on the their

dependency also from respective parent claims.

Applicant's argument regarding inherency are considered and are found to be

unpersuasive.

Response to Applicant's Remarks for 35 U.S.C. § 103

10. Claim(s) 4,16 31 and 35 were rejected under 35 U.S.C. 103(a) as being

unpatentable over BU'948, in view of IEEE1364.

<u>Regarding Claim 4,16 31 and 35</u>

Applicant has argued that that BU'948 does not teach the limitation discussed above

in response to 35 USC 102 arguments above. This limitation is rendered obvious

using the reasoning cited under 35 USC 102 arguments above.

Further, applicant argues that IEEE1364 does not teach behavioral functions on the

reprogrammable logic and lack of test bench callback process. These limitations are

taught by BU'948. In response to applicant's arguments against the references

individually, one cannot show nonobviousness by attacking references individually

where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986).

Since the reason provided that the unsuccessful combination of IEEE1364 with

BU'948 is recited as failure of BU'948 to teach the limitation of claim 1, applicant's

arguments are unpersuasive. Please see response to 35 USC 102 arguments

above. Please see motivation to combine in previous office action. Applicant's

argument regarding establishing a prima facie case of obviousness are considered

and are found to be unpersuasive.

11. Claim(s) 12 & 37 were rejected under 35 U.S.C. 103(a) as being unpatentable over

BU'948, in view of ED1995.

Regarding Claim 12 & 37

Applicant has argued that that BU'948 does not teach the limitation discussed above. Please see response to 35 USC 102 arguments above.

Further, applicant argues that ED1995 does not teach behavioral functions on the reprogrammable logic and lack of test bench callback process. These limitations are taught by BU'948. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Since the reason provided that the unsuccessful combination of ED1995 with BU'948 is recited as failure of BU'948 to teach the limitation of claim 1, applicant's arguments are unpersuasive. Please see response to 35 USC 102 arguments above. Please see motivation to combine in previous office action. Applicant's argument regarding establishing a prima facie case of obviousness are considered and are found to be unpersuasive.

Claim Rejections for Amended claims - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the

various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the

obligation under 37 CFR 1.56 to point out the inventor and invention dates of each

claim that was not commonly owned at the time a later invention was made in order

for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Regarding Claim 3, 8,18, 22, 27 & 31

Claims 3, 8,18, 22, 27 & 31 are essentially amended to correct the claim objections related to the improper numbering. Rejections for these claims are maintained unless further rejected below.

Regarding Claim 18 & 22

Claims 18 & 22 remain rejected because of their dependency from claim 13 from previous office action. Claim 18 & 22 amends "the selected portion includes at least one condition in the user design". This limitation is still taught by BU'948 (BU'948: Col.13 Lines 17-23, 55-64). Further, BU'948 does not limit the signal transmission based on the occurrence of at least one condition only (See: Col.13 Lines 60-64).

Regarding Claim 27 & 35

Claims 27-35 clarify the limitation but do not add to the limitation and they remain rejected as in previous office action.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and

any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

date of the advisory action. In no event, however, will the statutory period for reply

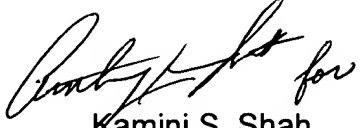expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akash Saxena whose telephone number is (571) 272-8351. The examiner can normally be reached on 9:30 - 6:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on (571)272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Monday, November 28, 2005

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